REMARKS

Claims 1-29 and 33-61 are pending in this application, of which claims 1, 19, 33 and 51 are independent. Claims 1, 2, 19, 33, 34 and 51 have been amended herein. Support for the amendments can be found throughout the Specification and at least at page 6, line 32 – page 7, line 19. No new matter has been added. Applicants submit that all of the pending claims are in condition for allowance. Applicants respectfully request reconsideration of the outstanding rejections and allowance of all pending claims in view of the remarks included herein.

I. Interviews with the Examiner

Applicants thank the Examiner for the courtesy of extending an interview on May 29, 2009 and the follow-up interview on June 4, 2009. During the interviews, regarding the outstanding § 112 rejections, the Examiner indicated that the sections identified by Applicants' representatives address the Examiner's concerns and that the § 112 rejections will be withdrawn. Regarding the application of the cited references, Applicants' representatives argued that the cited references cannot be combined because the Wang reference does not teach or suggest executable time-based graphical models. Even though the Examiner agreed that the Wang reference does not teach an executable graphical model, the Examiner indicated that he cites the Courant reference for the teaching of time-based, executable graphical model components and that the Kornerup reference is cited for the teaching of a post component. The Examiner asserted that Applicants' pending claims are broad in scope and additional references can be cited against the current claim language. The Examiner suggested amending claims to better define the subject matter recited in the pending claims.

II. Claim Rejections under 35 U.S.C. § 112

Claims 1-29 and 33-61 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner asserts that "an executable graphical model" and "executable graphical post component" are not disclosed in the specification. Applicants respectfully disagree.

Support for the term "executable block diagram model" may be found at least at page 13, line 24 of the Specification that recites:

"Events may also be used to handle errors occurred as a model executes."

Support for the term "executable graphical post component" may be found at least at page 7, lines 8-10 that provides:

> "The dialog box solicits a number of parameters from the user for the post block 22 including the number of inputs 36, the condition 38 under which the block executes, and the name assigned to the defined model event 40."

Accordingly, Applicants respectfully submit that the terms "executable block diagram model" and "executable graphical post component" are properly defined in the Specification. Hence, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 1-29 and 33-61 under 35 U.S.C. § 112, first paragraph.

III. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1-29 and 33-61 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0260700 by Wang et al. (hereafter "Wang") in view of U.S. Patent No. 5,522,073 to Courant et al. (hereafter "Courant") in further view of U.S. Patent Application Publication No. 2005/0055666 by Kornerup et al. (hereafter "Kornerup") (Office Action, page 2).

In the Office Action, the Examiner does not address the elements of claims that are rejected under 35 U.S.C. § 112, first paragraph with respect to cited references. During the interview, the Examiner clarified that he cites the Courant reference for the teaching of executable time-based components.

A. Claims 1-18 and 33-50

Claim 1 recites:

> "A method for controlling model execution in a graphical modeling environment, said method comprising:
> displaying a view of an executable graphical model with a plurality of executable time-based components, said executable graphical model including at least one user-configurable, executable graphical post component having at least one input port for receiving at least one input signal, said executable graphical post component being configured to post an event when a condition associated

with said at least one input signal of said executable graphical post component is satisfied;

logically associating at least one executable time-based component with said event;

identifying when said condition is satisfied during execution of said executable graphical model;

posting, using said executable graphical post component, said event by informing an event handler of an occurrence of said event in said graphical modeling environment;

notifying said at least one executable time-based component that is logically associated with said event of said occurrence of said event, said occurrence of said event triggering an execution of said at least one executable time-based component; and

executing said at least one executable time-based component in response to said notifying as opposed to in response to a specific point in time."

Applicants respectfully submit that Wang, Courant and Kornerup, alone or in any reasonable combination, do not disclose or suggest the following features of claim 1: **logically associating at least one executable time-based component with said event; notifying said at least one executable time-based component that is logically associated with said event of said occurrence of said event, said occurrence of said event triggering an execution of said at least one executable time-based component** and **executing said at least one executable time-based component in response to said notifying as opposed to in response to a specific point in time**.

Applicants provide below an overview of the subject matter of claim 1 in light of the newly recited claim features. Applicants then address each of these claim features separately with respect to the cited references.

1. overview of subject matter of claim 1

Amended claim 1 deals with one or more executable time-based components of an executable graphical model are logically associated with an event. Logical association is a way to indicate that the executable time-based components are associated with an event without requiring a graphical connection between the event post component posting the event and the executable time-based components (Present Application, page 7, lines 32-34). The executable time-based components that are logically associated with an event will execute when the graphical post component posts the event (Present Application, page 7, lines 14-19). As such,

the present application ties the execution of executable time-based components to the occurrence of an event (Present Application, page 6, lines 3-5). This way, the executable time-based components execute in response to the occurrence of an event, i.e. when the event is posted by the graphical post component, as opposed to executing in response to a time trigger.

2. *logically associating at least one executable time-based component with said event*

Applicants respectfully submit that Courant is silent about *logically associating at least one executable time-based component with said event*, as recited in Applicants' amended claim 1.

In Courant, the user selects a tool and the specific functions for the selected tool are presented to the user. The user may further select a specific function or event of the selected tool as the "when" event. After the user has selected the specific event that will be the "when" event, the user is presented with a list of tools to select from to represent the action tool for the "then" operation. Once the user selects a tool for the "then" operation, the specific functions for the selected tool are presented to the user, so that the user may further select a specific function of the selected "then" operation tool. The user may also select more than one "then" operation to follow a single "when" event (Col. 2, lines 34-48). As such, Courant discusses creating a routine for the software tools that perform predefined tasks (Col. 2, lines 29-30).

Applicants respectfully submit that the software tools of Courant are not equivalent to *executable time-based components* because the software tools are not components of an executable graphical model. In fact, Courant is silent about an executable graphical model. In Figure 8B, Courant illustrates a graphical user interface (GUI) that allows the user to define a routine. Using the GUI, the user defines the tasks that need to be performed by the tool when an event occurs. Courant does not disclose or suggest an *executable time-based component.* Courant associates tasks to be performed by a software tool with "when" events. Courant is silent about *logically associating at least one executable time-based component with said event*, as recited in Applicants' claim 1.

Wang fails to cure the shortcomings of Courant with respect to this claim feature. During the interview, the Examiner acknowledged that Wang does not disclose executable time-

based components. As such, Wang cannot cure the shortcomings of Courant with respect to *logically associating at least one executable time-based component with said event.*

Kornerup fails to cure the shortcomings of Courant and Wang with respect to this claim feature. Kornerup generally discusses specifying timing relationships among nodes in a graphical program. The user specifies desired timing of a first node with respect to timing of a second node (Abstract). However, in Kornerup, there is no *executable time-based component.* Furthermore, Kornerup is silent about *logically associating at least one executable time-based component with said event*, as recited in Applicants' claim 1.

As such, Kornerup, Wang and Courant, alone or in any reasonable combination, does not disclose or suggest *logically associating at least one executable time-based component with said event*, as recited in Applicants' claim 1.

> 3. *notifying said at least one executable time-based component that is logically associated with said event of said occurrence of said event, said occurrence of said event triggering an execution of said at least one executable time-based component*

Applicants respectfully submit that the cited references are silent about this feature. According to Applicants' claim 1, an event is posted using the executable graphical post component. When the event is posted, *said at least one executable time-based component that is logically associated with said event* is notified *of said occurrence of said event.* When the at lest one executable time-based component is notified of the occurrence of the event, the component can execute because *said occurrence of said event triggering an execution of said at least one executable time-based component.*

As provided above, the cited references fail to disclose or suggest an *executable time-based component that is logically associated with the event.* As such, the cited references cannot disclose or suggest *notifying said at least one executable time-based component that is logically associated with said event of said occurrence of said event*, as recited in amended claim 1.

Moreover, none of the cited references disclose or suggest that the occurrence of an event triggers the execution of an executable time-based component that was logically associated with that event.

Applicants respectfully submit that the cited references, alone or in any reasonable combination, disclose or suggest *notifying said at least one executable time-based component that is logically associated with said event of said occurrence of said event, said occurrence of said event triggering an execution of said at least one executable time-based component*, as recited in Applicants' amended claim 1.

> 4. *executing said at least one executable time-based component in response to said notifying as opposed to in response to a specific point in time*

The Examiner asserts that Wang teaches *executing at least one component from said plurality of components in response to said notifying as opposed to in response to a specific point in time* (Office Action, page 3). But the Examiner cites a section of Wang that recites *invocation of the DTP response to a specific point of time* (Office Action, page 3). Applicants respectfully submit that Applicants' claim 1 recites *executing said at least one executable time-based component in response to said notifying* ***as opposed to*** *in response to a specific point in time*. That is, according to Applicants' claim 1, the executable time based component executes in response to the notifying step as opposed to executing in response to a specific point in time. Wang does not disclose or suggest *executing said at least one executable time-based component in response to said notifying as opposed to in response to a specific point in time.*

Kornerup and Courant does not cure the shortcomings of Wang with respect to this feature because both references are silent about *executing said at least one executable time-based component in response to said notifying as opposed to in response to a specific point in time*, as recited in Applicants' claim 1.

Accordingly, for at least these reasons, Wang, Courant and Kornerup, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 1. Applicants respectfully requests allowance of claim 1. Furthermore, since claims 2-18 are dependent upon claim 1, the cited references also fail to disclose or suggest the features of dependent claims 2-18. Applicants respectfully request the allowance of claims 2-18.

Claim 33 is a medium claim corresponding to claim 1 and Applicants submit that claim 33 is allowable for at least the reasons discussed for claim 1. Claims 34-50 are dependent upon claim 33, and Applicants therefore submit that the cited references also fail to disclose or suggest each and every feature of dependent claims 34-50. Applicants request the allowance of claims 34-50.

2. Claims 19-30 and 51-61

Claim 19 recites:

> "A method for controlling model execution in a modeling environment, said method comprising:
> displaying a view of an executable model with a plurality of executable time-based components, said model including at least one user-configurable, executable graphical post component having at least one input port for receiving at least one input signal, said graphical post component being configured to post a specified event when a condition associated with said at least one input signal of said executable graphical post component is satisfied;
> identifying when said condition is satisfied during said execution of said executable model;
> posting, using said executable graphical post component, said specified event by informing an event handler of an occurrence of said specified event in said modeling environment;
> **interrupting execution of an executing event in response to said posting of said specified event; and**
> **performing an operation in said executable model in response to said posting of said specified event.**"

Applicants respectfully submit that the cited references, alone or in any reasonable combination, do not disclose or suggest ***interrupting execution of an executing event in response to said posting of said specified event*** and ***performing an operation in said executable model in response to said posting of said specified event***, as recited in claim 19.

The Examiner asserts that Courant teaches *interrupting execution of an executing event in response to the determination of the occurrence of said specified event* and *performing an operation in said model in response to the determination of the occurrence of the specified event* (Office Action, page 9). Applicants respectfully disagree.

The Examiner cites Figure 5 of Courant as teaching these features. Figure 5 of Courant illustrates a conceptual block diagram of a computing environment in which an event server functions as a central event distribution mechanism among a plurality of software tools such as a build tool, an edit tool, a debug tool, a static analyzer, a message connector, and a spell check tool (Figure 5 and Col. 6, lines 35-41). Computing environment can be implemented with a single computer on which event server and software tools are executable (Col. 6, lines 41-44). In order for one software tool to communicate with other software tools, a bi-directional communication path or socket must first be established between each software tool and the event server. As shown in FIG. 5, a socket, i.e. a hi-directional, point-to-point communication path, is established between build tool and even server (Col. 6, lines 59-67).

Courant is silent about *interrupting execution of an executing event*. In fact, nowhere in the reference does Courant disclose or suggest ***interrupting execution of an executing event in response to said posting of said specified event*** and ***performing an operation in said executable model in response to said posting of said specified event***, as recited in Applicants' claim 19.

Kornerup and Wang does not cure the shortcomings of Courant with respect to these features because both references are silent about ***interrupting execution of an executing event in response to said posting of said specified event*** and ***performing an operation in said executable model in response to said posting of said specified event***, as recited in Applicants' claim 19.

Accordingly, for at least these reasons, Wang, Courant and Kornerup, alone or in any reasonable combination, do not disclose or suggest each and every feature of claim 19. Applicants request the allowance of claim 19. Furthermore, since claims 20-29 are dependent upon claim 19, the cited references also fail to disclose or suggest the feauters of dependent claims 20-29 and Applicants request the allowance of claims 20-29.

Claim 51 is a medium claim corresponding to claim 19 and Applicants submit that claim 51 is allowable for at least the reasons discussed for claim 19. Claims 52-61 are dependent upon claim 51, and Applicants therefore submit that the cited references also fail to disclose or suggest the features of dependent claims 52-61. Applicants request the allowance of claims 52-61.

CONCLUSION

In view of the above amendment, Applicants believe the pending application is in condition for allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-056RCE2. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: June 18, 2009

Respectfully submitted,

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